

DUSTPAN HAVING DEVICE FOR REMOVING DUST

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a dustpan, and more particularly to a dustpan having a structure or device for removing dust or for facilitating the dust removing from brooms.

2. Description of the Prior Art

Typical dustpans comprise a pan member having a chamber and an opening formed therein for receiving dust into the pan member.

However, while sweeping floor with brooms, a number of hairy members or fibers or threads or the like may be attached onto the brooms, and may not be easily disengaged from the brooms.

The users may have to use one of their hands to hold the broom, and the other hand to remove or to disengage the hairy members or the fibers or the threads or the like from the brooms, and thus may have their hands dirtied by the dust or the hairy members or the fibers or the threads or the like.

The present invention has arisen to mitigate and/or obviate the afore-described disadvantages of the conventional dustpans.

SUMMARY OF THE INVENTION

The primary objective of the present invention is to provide a dustpan including a structure or device for removing dust or for facilitating the dust removing from the brooms without hand contacting with the dust.

In accordance with one aspect of the invention, there is provided a dustpan comprising a housing, and a casing pivotally

attached to the housing, and rotatable relative to the housing between an upward folding position and a downward working position. The casing includes a chamber formed therein for receiving dirt, and defined by an upper panel, a bottom panel, and two side panels, and includes a front opening formed therein, and includes at least one projection extended forwardly from the upper panel of the casing, and extended into the front opening of the casing, for dust removing purposes, such as for removing the hairy members or the fibers or the threads or the like from the broom, and thus for preventing the users' hands from being contacted with the brush member of the broom and the dirt or the hairy members or the fibers or the threads or the like.

The housing includes two side walls, the casing is pivotally secured between the side walls of the housing. For example, the panels of the casing are pivotally secured to the side walls of the housing with pivot axles respectively. The housing includes a space formed therein, and defined by the side walls, to partially receiving the casing.

A broom may further be provided and includes a brush member, the housing includes a front wall having a recess formed therein to partially receive the brush member of the broom. The broom includes a hand grip, the housing includes a handle for supporting the hand grip of the broom. The housing includes a catch attached to the handle, for detachably retaining the hand grip of the broom to the handle of the housing.

Further objectives and advantages of the present invention will become apparent from a careful reading of the detailed description

provided hereinbelow, with appropriate reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded view illustrating a broom for sweeping floor, and a dustpan in accordance with the present invention;

FIG. 2 is a perspective view of the dustpan, in which the dustpan is arranged in a close position;

FIG. 3 is a perspective view illustrating the operation of the dustpan; and

FIG. 4 is a perspective view illustrating the other arrangement of the dustpan.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, and initially to FIGS. 1 and 2, a dustpan 20 in accordance with the present invention comprises a housing 21 including a space 22 formed therein, and defined by two side walls 23, and a front wall 24. The front wall 24 of the housing 21 includes a recess 25 formed therein (FIG. 2) for partially receiving the brush member 31 of a broom 30.

The dustpan 20 further includes a handle 26 attached to or extended from the housing 21, and a catch 27 attached to the handle 26, for detachably retaining the hand grip 33 of the broom 30 to the handle 26 of the housing 21 (FIG. 2). It is preferable that the handle 26 of the dustpan 20 and/or the hand grip 33 of the broom 30 includes a retractable structure for allowing the handle 26 and/or the hand grip 33 to be adjusted to different lengths.

The dustpan 20 further includes a pan or casing 40 rotatably or pivotally attached to the housing 21, or secured between the side

walls 23 of the housing 21 with one or more pivot axles 29. The casing 40 includes a chamber 41 formed therein, and defined by a bottom panel 42, an upper panel 43, two side panels 44, and a rear panel 45. The casing 40 may be partially received in the space 22 of the housing 21.

For example, each of the side panels 44 of the casing 40 is rotatably or pivotally attached to the respective side walls 23 of the housing 21 with the pivot axle 29, for allowing the casing 40 to be rotated relative to the housing 21 between a downward or horizontal working position (FIGS. 1, 3), and an upward or vertical folding or storing position (FIG. 2).

It is preferable that the rear panel 45 of the casing 40 is a flat panel or includes a flat or planar structure, for allowing the casing 40 to be stably erected and supported on the ground with the rear panel 45 of the casing 40 when the casing 40 is rotated relative to the housing 21 at the upward or vertical folding or storing position (FIG. 2).

It is further preferable that, as shown in FIGS. 1 and 3, the upper panel 43 of the casing 40 includes a length smaller than that of the bottom panel 42 of the casing 40, in order to form a widely opened front opening 47 in the casing when the casing 40 is rotated relative to the housing 21 at the downward or horizontal working position (FIGS. 1, 3), and thus for allowing the dust or the dirt 60 (FIG. 3) to be easily swept into the chamber 41 of the casing 40.

The casing 40 further includes one or more projections 49 extended forwardly from the upper panel 43 of the casing 40, and extended into the front opening 47 of the casing 40. The projections

49 of the casing 40 may be arranged or formed into various kinds of shapes (FIGS. 1, 4), and/or lengths, and/or widths, and/or thicknesses, and/or diameters, for engaging with various kinds of brooms 30.

5 In operation, after sweeping the floor, a number of hairy members or fibers or threads or dirt or the like may be attached onto the brooms. The users may have the brush member 31 of the broom 30 moved or engaged through the projections 49 of the casing 40, for allowing the projections 49 of the casing 40 to be engaged into
10 the brush member 31 of the broom 30, and thus for allowing the hairy members or the fibers or the threads or the like to be easily removed or disengaged from the broom 30 with the projections 49 of the casing 40, without contacting the users' hands with the brush member 31 of the broom 30 and the dirt 60 or the hairy members or
15 the fibers or the threads or the like.

Accordingly, the dustpan in accordance with the present invention includes a structure or device for removing dust or for facilitating the dust removing from the brooms without hand contacting with the dust.

20 Although this invention has been described with a certain degree of particularity, it is to be understood that the present disclosure has been made by way of example only and that numerous changes in the detailed construction and the combination and arrangement of parts may be resorted to without departing from
25 the spirit and scope of the invention as hereinafter claimed.